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GEOGRAPHIC MEMORANDUM

SPECIFIC GEOGRAPHIC DATA FOR THE TOMSK AREA

SOILS OF THE BELOBORODOVO AREA

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W A R N I N G

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SOILS OF THE BELOBORODOVO AREA

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This report describes and gives the location of soil types in the vicinity of Beloborodovo, Tomskaya Oblast'. Particular attention is devoted to the texture of the soils, the major factor influencing their permeability.

The area under study lies between 56°37'N and 56°33'N; it is bounded on the west by the right bank of the Tom' River and from there extends eastward to approximately 54°37'E. For the area north of 56°37'N, no detailed information on soils is available; but it is reasonable to assume that the soil types found to the south of this latitude continue northward for several miles.

The six types of soil within the area have been mapped. Two of these -- the sandy soils and the sandy loam podsols -- have relatively large particles and are therefore highly porous and well drained. Together, these two types cover about two-thirds of the area, including almost all of the section between Iglakova and a point approximately 1 mile upstream from Beloborodovo (see map, p. 3). A third type, podsolized alluvium, has a coarse texture but, because of its lower location, this soil is usually saturated. The three remaining types are peaty or clayey, with extremely low permeability and resultant poor natural drainage.

The sandy soils, which support only pine forests, absorb water with great rapidity. Virtually none runs off along the surface even during the heaviest downpours. The sandy loam podsols have a finer texture than the sandy soils and are therefore somewhat less permeable; even so, only the most intensive rainfall will cause an appreciable runoff. Soil of this type supports a growth of birch with an intermixture of pine.

The peat bog soils found northeast of Iglakova, on the other hand, are extremely compact and have very poor natural drainage. They underlie marshes in which sedges and sphagnum moss comprise the predominant vegetation.

In the meadows along the valleys of the Tom' River and its tributaries, which are flooded intermittently throughout the year, the soil is podsolized alluvium, originally deposited by flood waters. This soil has a sandy loam texture, conducive to good drainage, but it is likely to be saturated during

much of the year since the meadows lie less than 10 feet above the normal water level of the streams.

The peat bog soils intermixed with clay alluvium are found upstream from Beloborodovo and below Iglakova in narrow strips between the podzolized alluvium and the Tom' River itself. They support a growth of sedges, moss, and grass. These highly impermeable soils are either saturated or flooded during most of the year.

One small area of intermixed dark clay podzols and slimy swamp soils is located immediately to the northeast of Beloborodovo. The soils of this area are compact and almost impermeable; they are covered by low, wet meadow and swamp overgrown with trees and bushy thickets.

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